

Patent Abstracts of Japan

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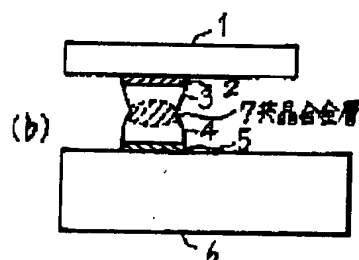
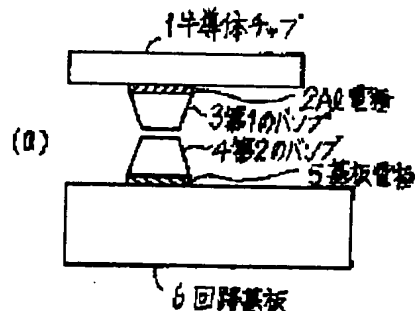
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TITLE : SEMICONDUCTOR DEVICE,
ELECTRONIC CIRCUIT DEVICE, AND
PRODUCTION THEREOF



ABSTRACT : PURPOSE: To maintain an initial large area of the contact between an Al electrode and a first bump since the forming of the bump by heating and bonding butted parts of the first bump made of a high m. p. solder on the Al electrode and second bump made of a low m. p. solder on an electrode corresponding to a circuit board at the m. p. of the high m. p. solder or less.

CONSTITUTION: A first bump 3 made of a component metal (a) of an alloy to cause an eutectic reaction is formed on a pad-like Al electrode 2 of a semiconductor chip 1 by the mask vapor deposition or similar method. The entire bottom face of the bump 3 is closely contacted with the face of the electrode 2. A second bump 4 made of an alloy (b) which causes the eutectic reaction is formed on a pad-like substrate electrode 5 corresponding to the circuit board 6. An eutectic alloy layer 7 composed of the component metals (a) and (b) is formed between contact parts of both bumps 3 and 4 whereby both bumps are bonded. Thus, the Al electrode is tightly connected onto the circuit board at a low resistance, without causing poor wetted part, directly using the solder bumps.

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